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Amateur Television Quarterly

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VE5EMO ATV REPEATER

Bruce VE5BNC, Gus VE5SPI, Brian VE5MKV and Bob VE5RGM (not in picture) assembled at Luther tower at 1:00. We were certain that in a couple of hours the repeater would running and our remote testers Lee VE5LEE, Dwayne VE5HZ, and Bill VE5DN would be giving us P5 signal reports.

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Amateur Television Quarterly

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Make Mine Margarita's

Gene Harlan - WB9MMM

Hi again. When you play catch up, seems like you just finished an issue when you have to have another done. At least Henry gave me a few extra articles that had collected at his house. That, in addition to a few new articles is what makes this issue. Thanks to all that contribute and make ATVQ an interesting publication. However, the "IN" basket is slim. I have a few promises of articles, in addition to a couple more not yet used from the "pile". So put your creative juices to work and start writing. I'll take articles hand written or (preferably) in electronic form. When it comes off a word processor, all the formatting stays with the article, otherwise I need to join each line of text manually (that still beats typing though!!!). What I would like to see is more ATV and SSTV information about:

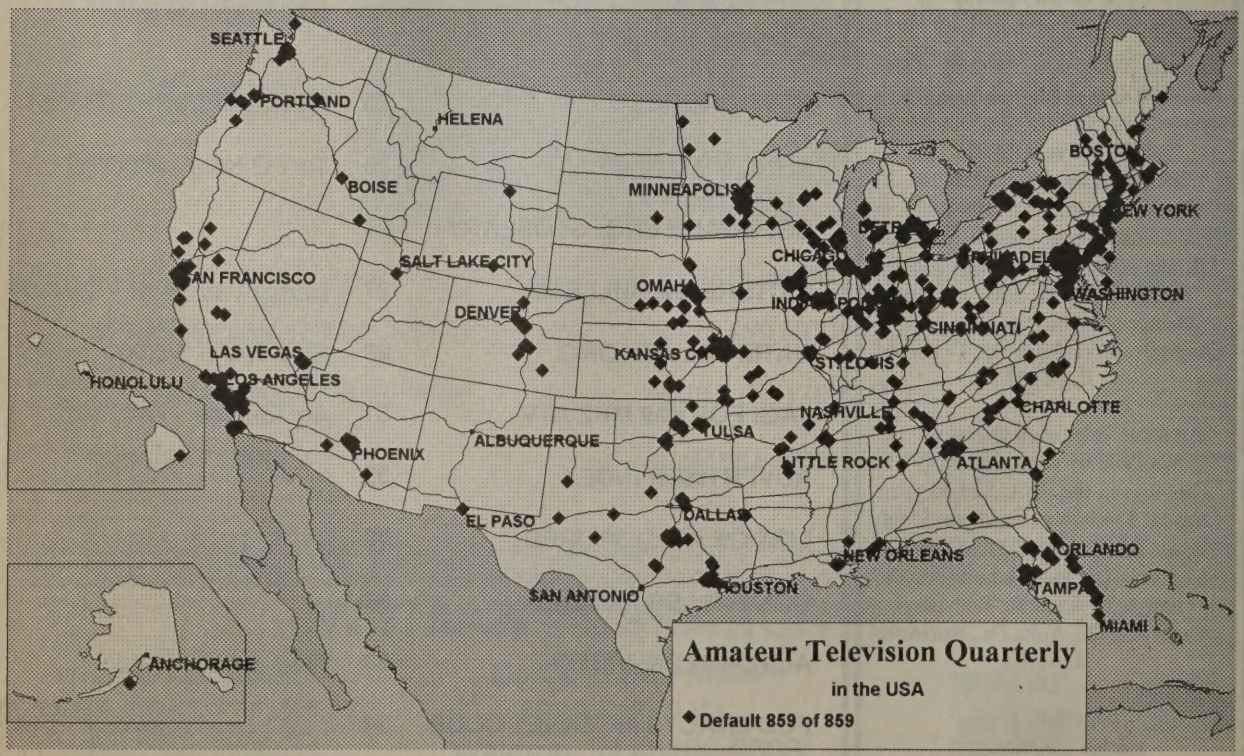
1. What is your club doing - banquets - pictures of people (labled).
2. How are you using ATV/SSTV for public service.
3. Construction articles - the more the better, I like these !
4. Basic ATV or SSTV. We always need the basic articles to keep the newcomer interested.
5. What is your ATV or SSTV (yes, there is an SSTV repeater) repeater doing. Local net? Show and tell WITH PICTURES.
6. Activities with schools and balloons.
7. Activities with model aircraft and ATV.

Well, you get the idea. We want all the types of articles that have kept us interested in the hobby this long. If you have submitted an article that you have not seen in print yet, drop me a line. Maybe I do not have it, and if not, you may be able to re-submit.

Below is just something of interest (to me at least). It is a map of where all of you in the USA live. We also have about 50-60 Canadian/overseas subscribers. Unfortunately, MapLinx won't print a map of the rest.

Have a very Merry Christmas. I hope that the Holidays and the New Year are good to all of you!

God Bless - Gene Harlan - WB9MMM



'98 DAYTON FRIDAY NITE ATV

The Fast Scan ATV Party/Meeting will be held on Friday at 7 pm. The location will be at the West Carrollton Lions Club at 435 East Main Street, West Carrollton, Ohio, which is about 25 min. from the Dayton Hamvention. This event is being sponsored by the ATCO & HATS Fast Scan ATV Clubs. Plan on bringing ATV Video tapes, ATV Club projects or your own ATV project for show and tell. If you get lost call 859-7276 (W. Carrollton Lions Club) For more info contact John Hey at W8STB@concentric.net or 937-859-5294.

Directions. From Dayton head South on 1-75, Take West Carrollton exit #47, stay in right lane, pass football field and Jr. High, At traffic light turn right onto Cedar Street go one block and turn right onto East Main. The Lions Club is the last building on the left (gray).

Directions from Cincinnati, Ohio take 1-74 to exit #44 Miamisburg-Centerville. Stay in middle left hand turn lane and turn left onto route 725. At Alex Rd turn right. After crossing RR tracks go to 2nd traffic light and turn left onto Central Ave. Get in right hand lane, pass football field and the Jr. High. At traffic light turn right onto Cedar go one block and turn right onto E. Main. The Lions Club is the last building on the left (gray). Speakers to be announced later.

DAYTON 98 SATURDAY AGENDA

Room 3, 2:45-5:00 FAST SCAN TV, Moderator: Bill Parker W8DMR. Speakers to be announced later.

AUTHORS GUIDE

Preferred method of receiving articles is from **Microsoft Word**, however **Wordperfect** is OK too. Next preference would be **ASKII text**, followed by **typewritten** or **hand written** (clearly). Diagrams or pictures (B&W or Color) can be sent in hard copy, or if you scan them in, save to PCX or JPG formats (actually I can read about anything). If you send a computer disk, make sure it is PC (not MAC) format.

Articles can be sent to:

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or email to: **atvq@aol.com**

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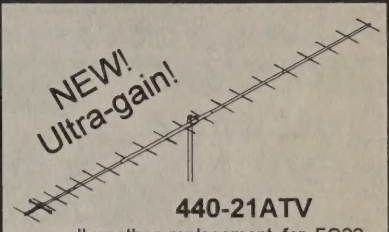
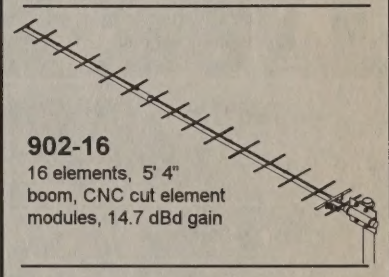
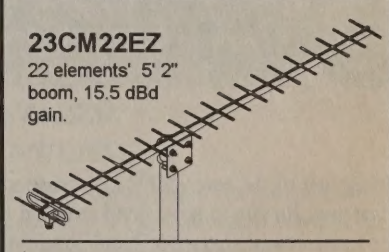


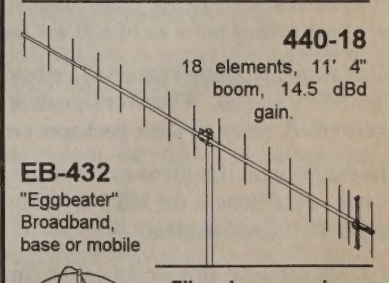
440-21ATV
all-weather replacement for FO22, sealed driven element, 14' 5" tapered boom (1-1/2", 1-1/4", 1"), >15.9 dBd gain.



902-16
16 elements, 5' 4" boom, CNC cut element modules, 14.7 dBd gain

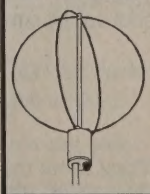


23CM22EZ
22 elements' 5' 2" boom, 15.5 dBd gain.



440-18
18 elements, 11' 4" boom, 14.5 dBd gain.

EB-432
"Eggbeater" Broadband, base or mobile



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SSTV at the limit: MSCAN and MULTISCAN

by Danny Van Tricht - ON4VT email: ON4VT@ping.be
Hulshout 2
B-2235 Hulshout
Belgium

MSCAN SCREEN DISPLAY

Being one of the rare SSTV DX chasers in the world, it's very important for me to have good soft and hardware to read and send pictures in very poor band conditions. For that reason I have been testing out a lot of soft and hardware packages.

All of them give satisfying results when you receive strong and clear SSTV signals. Wherever signals are getting weaker and / or disturbed, many of those packages are less or more worthless.

The only system that gives me readable pictures in the most extreme conditions is the MSCAN software in combination with the MULTISCAN modem.

MSCAN software also works on the simple "Hamcomm" modems.

MSCAN 2.20

Let me first tell you something about the advantages of MSCAN 2.20, the new version released MAY 1997.

The multitasking is phenomenal. A dual screen (TX/RX) and 14 thumbnails. With the multiscan modem it's even possible to add text to a picture that's already in TX (!!!). When receiving pictures, you can load, save, add text, etc.. on the other displayed picture!
Loads BMP, JPG, TGA an GIF files. A few nice graphic effects are added (transbox, box, move, mirror)
The synchronization is remarkable: MSCAN starts ALWAYS and CORRECT! When a VIS code is received, MSCAN starts the picture at the top of the screen.
MSCAN has also all FAX modes! The 120 lpm mode is superb in quality (very high resolution).

And this can be the revolution in SSTV world: the TV mode. The TV mode is based on a refreshing new idea: instead of one single frame, transmit 4 interlaced frames. The major advantage of this method is that the whole picture will be visible after only 25% of the transmission time. Also noise or fading will not cause an entire group of lines to become unreadable, but will be visible as noise spread out over the whole picture. At this point, however, there are also some disadvantages: bad synchroniza-

Frame 1

Frame 2

Frame 4

3 rd PICTURE WAS
BAD ON DISK

Frame 3

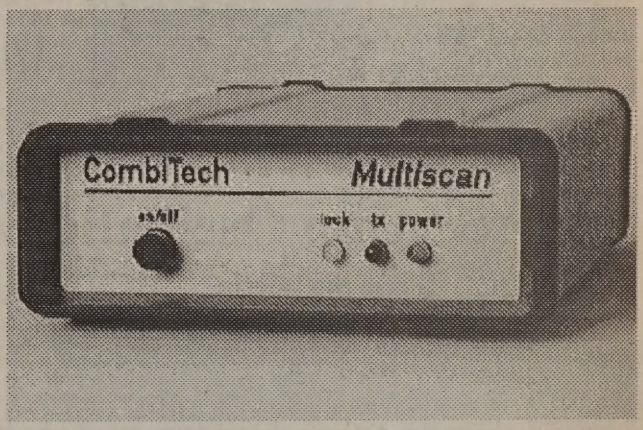
tion will produce ragged vertical lines instead of a skewed picture. The same goes for multi-path. The TV modes will have to be developed further to become a really good alternative, they are now in their experimental faze. The line times of TV1 and TV2 have been made compatible with Wraase 180 and M1, so that viewers with other programs can monitor your transmission. They will see your picture 4 times on their screen, stacked on each other.

Receiving a TV mode transmission gives you a wonderful sensation: in very little time a complete picture will become visible on your screen. After that the picture will slowly increase in resolution, showing more and more detail.

I've been doing some tests with it, even over long distance. Here we see the picture received from VK7AAB over long path on a noisy 20 meter band (distance 23000 km).

The modem: MULTISCAN

MSCAN works properly on most simple interfaces. But especially for this software the MULTISCAN modem is designed.



MULTISCAN

The modem locks on an SSTV signal, from that moment on it ignores all QRM. When sending, a nice sinusoidal wave is generated, resulting in very clear and smooth pictures!

The MULTISCAN is a real modem, it gives the computer more capacity to do other things. Resulting in very amazing multitasking in MSCAN.

Since I've been using this system, the SSTV DX chasing has started definitely.

It gives smooth pictures in the most severe conditions and the multitasking allows to send quick answers to exotic CQ pictures!

MSCAN and MULTISCAN are made by PA3GPY, Mike (a professional who made his job of this).

You can reach him for info and order:

PO BOX 507, 3235ZG Rockanje, The Netherlands
E-mail: **combitech@mscan.com**
Website: **http://www.mscan.com**

433.25, cable ch 59

From the Internet

I occasionally get requests for transmitters on 433.25 MHz from hams wanting to use cable channel 59 to receive. The reason 433.25 is not used is because the sound sub-carrier falls in the satellite sub band at 437.75 and could interfere, plus it is getting close enough to the 432.0 and 432.1 weak signal and SSB frequencies to make them nervous. 434.0 was agreed to as an alternative by ATV'ers, Squelch Tailers, weak signal and satellite users here and tests made to verify the minimum chance of interference. 434.0 is still within the AFC pull in range of most cable ready TV sets on cable channel 59 so you don't really lose anything by transmitting on 434.0 vs 433.25 MHz.

So in the interests of keeping peace with our neighbors, we do not stock or sell 433.25 MHz crystals and suggest that 434.0 be used instead.

Tom O'Hara W6ORG
P. C. Electronics
tom@hamtv.com

Teletec Amp Oscillation

From the Internet

It has been discovered by Jeff Basting, N8QPJ, that the Teletec pre-amps will go into oscillation when switched out (panel jack connected to +V). This oscillation results in about a -50 dBm signal between 425 and 430 MHz coming out the input jack to the connected transceiver downconverter. -50 dBm is a very strong signal and can put interference bars or de-sense your reception of signals in the 420-450 MHz band. There is no problem if the pre-amp is active (no jumper). The oscillation occurs because there is no input or output load to the J310 pre-amp Jfet but power is still applied when switched out

I confirmed what Jeff found in my Teletec DXP-U150 and talked to Tom Alley at Teletec. He too confirmed it and has a fix. If you purchased a Teletec amp prior to Nov, you can ship it to Teletec to have it fixed with about a one week turn around according to Tom Alley. However, he said you will have to pay two way shipping. Call 1-888-323-6888 for return authorization and return shipping cost. Note that this is only free for fixing this design defect, and nothing else. Anything else falls under their 18 month warranty policy. For those over warranty, or you have already broken the seal over the bottom plate screw, you can lift one end of L15 to remove power from the pre-amp like I did on mine. The pre-amp has a fairly high noise figure vs those in our downconverters, so they are not of much use and can actually result in overload and intermod interference from too much system gain. Except for this pre-amp oscillation problem, it is a great transmit amp.

While I have only verified the problem with the 70cm amps, I understand that it could also be a problem with the Teletec amps made for other bands.

73, Tom O'Hara W6ORG
P. C. Electronics
tom@hamtv.com

I KNOW IT'S OUT OF RESONANCE--YOU BOUGHT OUR "PINOCCHIO" MODEL HANDHELD, AND EVERY TIME YOU TELL A LIE ON THE BAND, THE RUBBER DUCK GROWS AN INCH

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left image — right image

Easy 3D SSTV

Now you can use Blaster SSTV with the QuickCam camera to produce your own 3D pictures for SSTV. Just start the camera, aim for the left eye picture, press the space bar, slide the camera 2 1/2" to the right for the right eye picture, and press the space bar again. Blaster SSTV will then produce the RED/BLUE 3D image for you. **It's so easy!**

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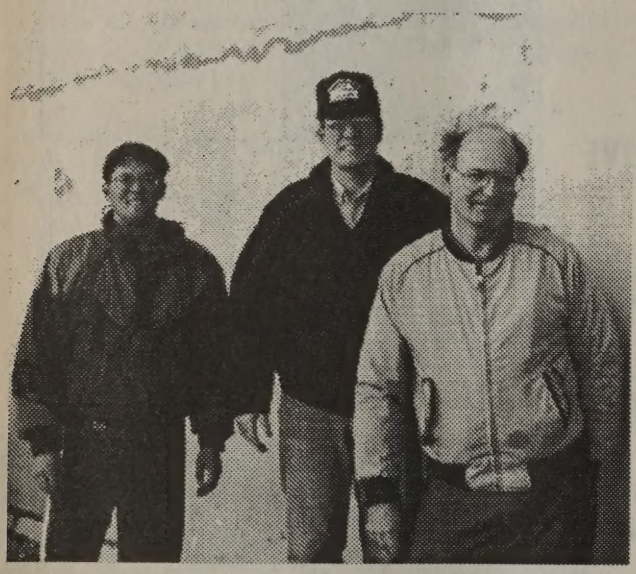
VE5EMO ATV REPEATER
SASKATOON, SASKATCHEWAN, CANADA

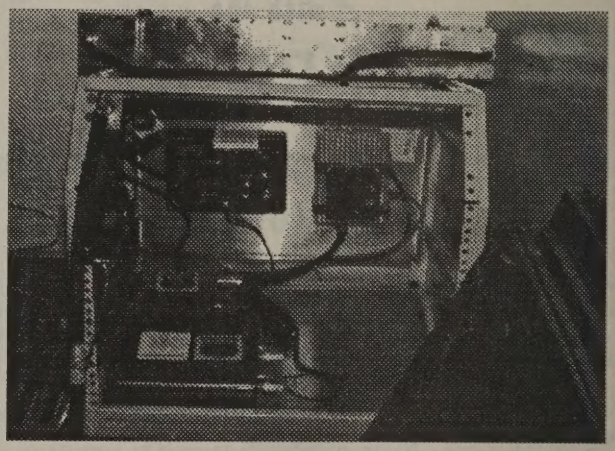
by Robert Meldrum - VE5RGM
235 Frobisher Crescent
Saskatoon, Saskachewan
Canada

October 12, 1997, was an important day for Saskatoon amateur radio. This was the day the VE5EMO ATV repeater went on the air.



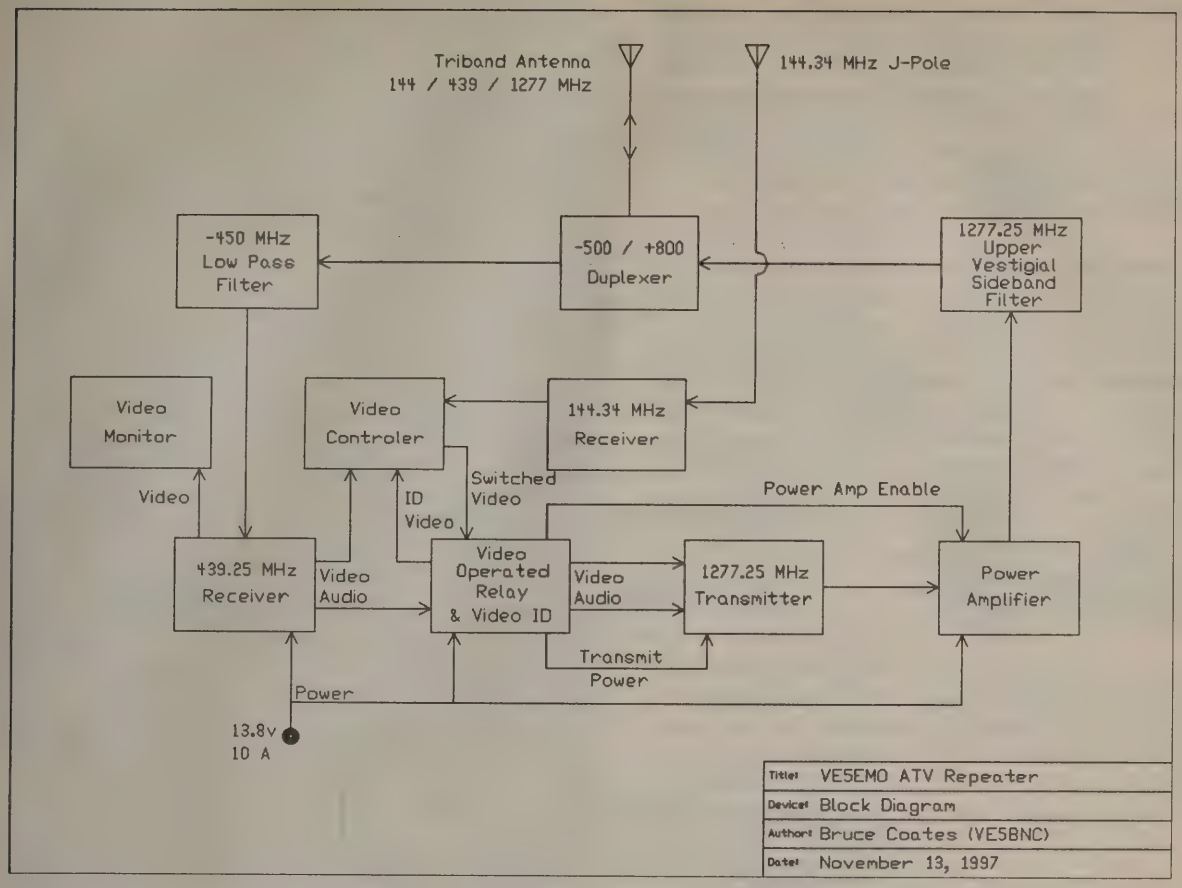
Bruce VE5BNC, Gus VE5SPI, Brian VE5MKV and Bob VE5RGM (not in picture) assembled at Luther tower at 1:00. We were certain that in a couple of hours the repeater would running and our remote testers Lee VE5LEE, Dwayne VE5HZ, and Bill VE5DN would be giving us P5 signal reports.

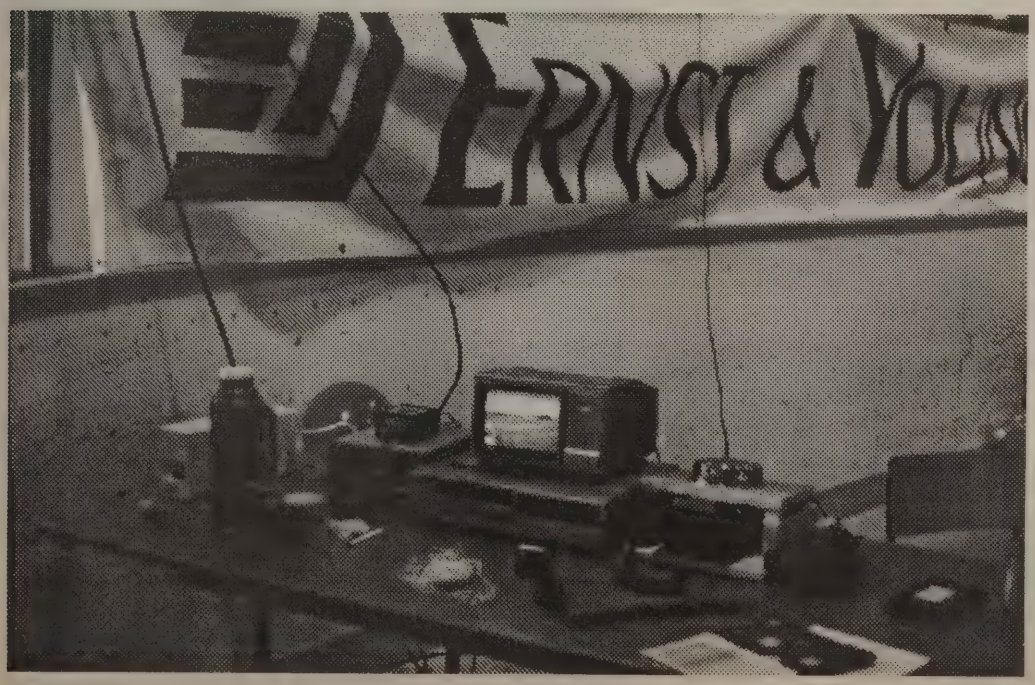
Well, "Murphy" came along (uninvited) to help us and by 5:00 we still did not know whether the repeater had survived the install. More about this aspect of the story in a moment but first a brief description of how the repeater project got started.
In 1995 Dwayne VE5HZ and Bob VE5RGM got interested in amateur television. Talk led to action and a couple of ATV transceivers were purchased. In Canada there is only one UHF frequency allocated to ATV, 439.25 Mhz, so our choice of frequency was easy. Soon others joined in and the Saskatoon Amateur Radio Club supported the establishment of an ATV repeater. The project did not come together however, until the Saskatoon Emergency Measures Organization (EMO) got involved and Don Litz, the co-ordinator, was able to secure some funding to put the repeater on the air.



Bruce VE5BNC was the technical guru who assembled the repeater. Our input is a PC Electronics ATV receiver ATVR-4 on 439.25 Mhz with a VOR-2a controller and an Elktronics ID board. In order to help prevent de-sensing the receiver we used a Mini Circuits low pass filter. The input feeds a North Country Radio transmitter on 1277.25 Mhz AM which drives a Down East Microwave 2340PAHS 35 watt amplifier. The antenna system is a Diamond X6000A vertical tri - bander running off approximately 40 feet of hard line fed by a DCI VSB filter, and a Diamond MX37N Duplexer. The only major hitch we encountered was an impedance mismatch between the receiver and the transmitter. Bruce solved this problem by modifying one of the sets of audio and video outputs on the ATVR-4 to match the transmitter inputs.

Bruce VE5BNC was responsible for organizing communications for the MS Society walkathon. As it turned out the ATV repeater was ready for a real life test about the same time as the walk so Bruce seized the opportunity to incorporate ATV into the communication plan. The repeater was set up in the Saskatoon Amateur Radio Club's communication trailer and installed at a central site. Needless to say, the volunteers who put on the MS walk were impressed by the quality of the pictures and with three camera positions we gave good coverage of the entire route. (I personally think that until the organizers





saw the first pictures come off the down converter they did not believe that we could pull it off)

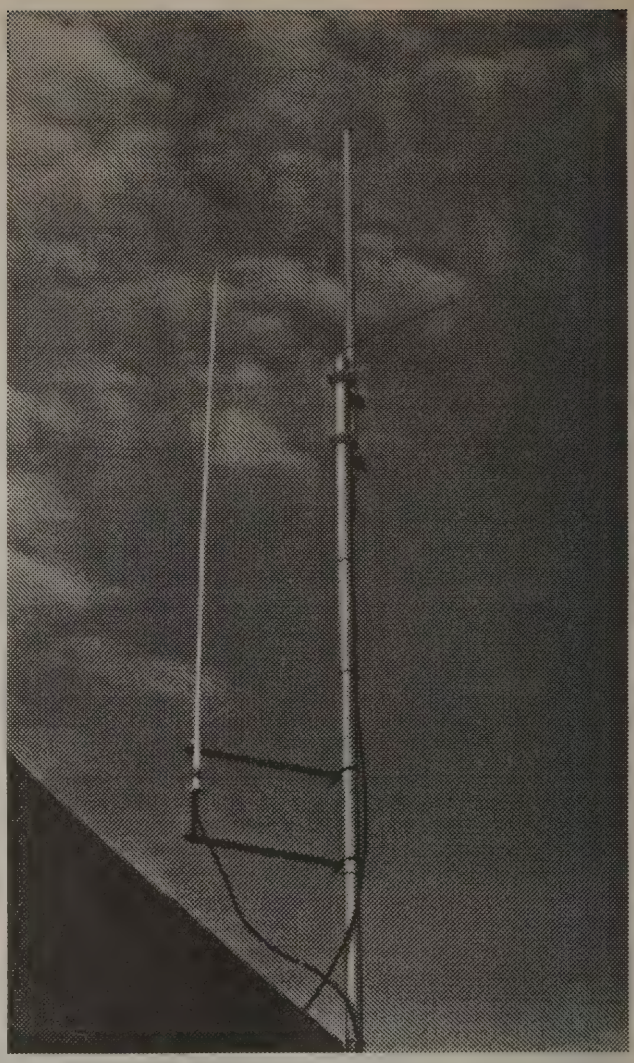
With the preliminaries out of the way we can turn back to October 12. October weather in Saskatoon is unpredictable. The morning started off with a few snow flakes which later turned to a light rain. By noon all we had to contend with were high winds and cold temperatures. Of course, our inside work went fine. The repeater was installed in its bay in the

radio room atop Luther Tower and the hard line was fed outside. At this point "Murphy" joined the crew. The mast clamps proved to be ½ inch too small so Bob and Brian went Sunday shopping for replacements. Meanwhile Bruce and Gus continued to work at the site. By the time the shoppers returned, the door knob on the access door to the roof had jammed. Luckily there was no one on the roof at the time! It took us the better part of an hour to finally "persuade" the door to open.

Outside, the wind had started blowing HARD. Just ask Bruce. There is nothing like being strapped to a tower with a wrench in your hand, 23 stories in the air with the wind blowing so hard you have to lean into it to stand up. None the less, the antenna took its proper place on the tower and by 5:00 with the hard line connected we were ready to try the repeater. Unfortunately, by this time the crew had to abandon the project for Thanksgiving dinner (Canadian Thanksgiving is about one month earlier than the American version). Right after the local area two meter net the next evening Bill VE5DN announced that we would be holding our first ATV net on the new repeater. Everyone was able to get into the repeater with no problem and generally good signal reports were being exchanged.

Planned uses for the repeater include a weekly net, participation in public service events and of course, video support for the Saskatoon Emergency Measures Organization. Don Litz expects that the ability to send live video from a disaster site to EMO headquarters will be a valuable addition to our city's emergency response capability. As usual, Saskatoon Hams are more than willing to help.

Future plans for the repeater include additional filtering for the front end to knock out some of the pagers which are creeping into our signal, a 440Mhz pre-amplifier and perhaps some day, a pan and tilt tower camera.



VE5EMO ATV REPEATER

Input - 439.250 Mhz AM

Output - 1277.250 Mhz AM

Location - Luther Tower, Saskatoon, SK

Sponsors - Saskatoon EMO and

Co-ordination 144.340 Mhz FM

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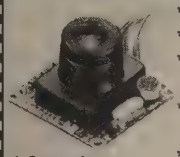

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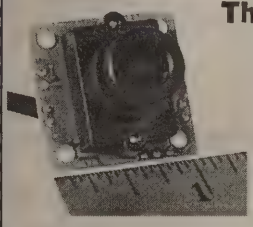

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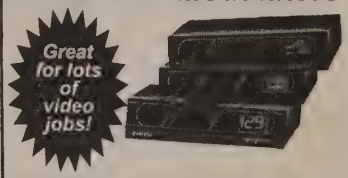

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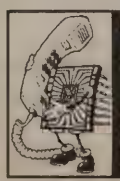

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Reception of FM TV on 10 GHZ

by Denys Roussel,F6IWF
Translated by
John Jaminet - W3HMS email: W3HMS@aol.com
912 Robert St.
Mechanicsburg, PA 17055

(Translator's note: This article appeared in the March 1997 edition of B5+, the magazine of the French national ATV association, ANTA. I have kept the metric measures as they are easier to work with than our own English measures and metric measuring devices are commonly available in good hardware stores.)

An individual satellite reception station is composed of an antenna, a converter or LNB and a satellite receiver which selects and demodulates the TV emissions with a first IF of 950-2050 MHZ (Translator's note: 950-1450 Mhz in the USA) Today, the prices of satellite receiving equipment have been considerably reduced. These systems are easily adaptable to our 3 cm band and constitute the best solution for starting in FM TV on 10 GHZ with a modern concept.

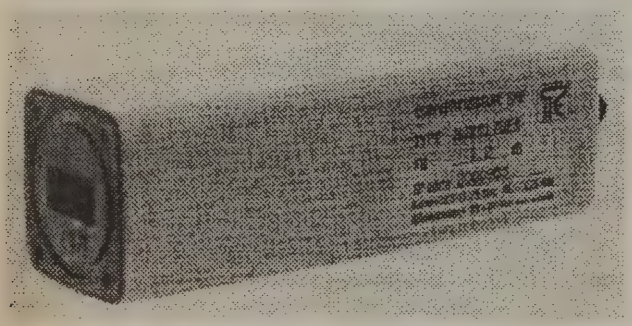


Photo of French LNB

THE ANTENNA

The antennas can take different forms. The flat antennas have a pass-band too narrow for our use and they are not readily changeable. By contrast, the parabolic antennas are particularly adaptable, taking count of the aperiodic properties of the reflector. The output of the offset antennas is superior to those prime focus antennas. For example, the gain from an offset on 10 GHZ, in function of its diameter, will be

Dia. in cm	Gain (db) 2.54 cm =1 inch
50	33
60	34.5
70	36
80	37

50 to 70 cm is sufficient and is easier to point in the direction of the transmitter.

The source is most often made in 3 parts:

The horn
The waveguide
The interface adaptation (Step)

Today, these parts and the head are often a single piece and it is difficult to have access to the source. My personnel choice is an antenna from the Tonna Line. One of the advantages of this antenna line is the existence of a horn equipped with a guide of 22 mm interior diameter. The adaptation is better than 12 db over the range of 10-10.5 GHZ and the mounting of the source is possible on all Tonna antennas. The models Tonna 49 cm in fiber glass and Tonna 68 cm are particularly acceptable. For the other antennas, it is always possible to replace the source C120 by another. As the conical horns are not easy to make, one can build a pyramid type model, see the design herein. The law of offset antenna illumination demands a horn of about 10 db gain.

PLANS (top of next page)

1. Plans d'un cornet realisibale facilement par soudure a l'etain. = Plans for a horn easy to build by soldering tin.

2. Côtes, tole etamee 0.5 mm=Sheet metal sides 0.5 mm thick.

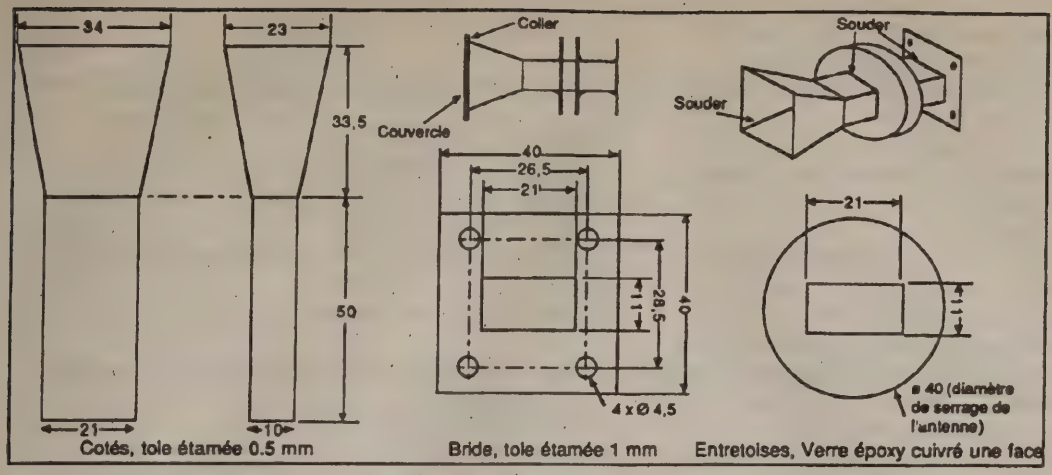
3. Bride, tole etamee 1 mm=strap, sheet metal 1 mm.

3. Couvercle=cover

4. Coller=glue

5. Bride, tole etamee 1 mm=Sheet metal strap, 1 mm thick.

6. Souder=solder

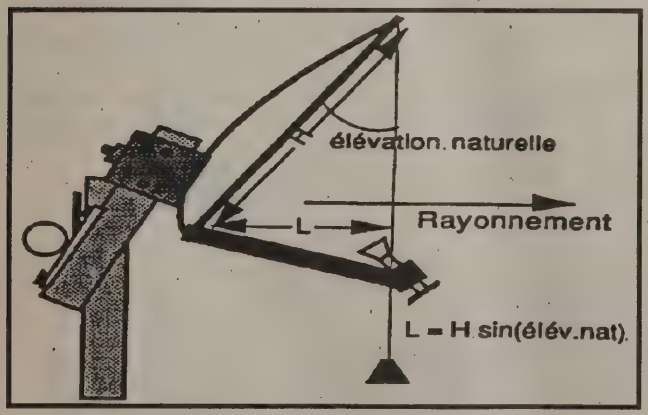


PLANS

7. Entretoises, verre epoxy cuivre une face=Two rings of fiber glass with at least one side copper.

8. 40 (diametre de serrage de l'antenne)=40 cm mounting clamp diameter.

For placing the horn, it must be kept on the axis of the initial source and the focal plane. The position isn't very critical and a shift of plus or minus 5 mm will not affect the results appreciably. The pre-adjustments of the antenna can be made with a plumb line. The fine tuning absolutely requires a beacon or another station situated a few miles away.

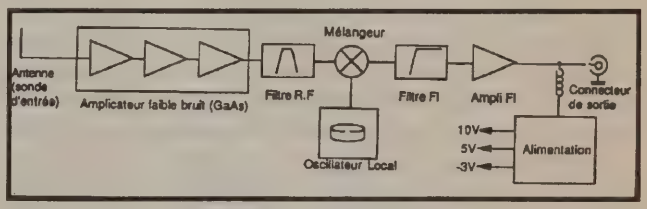


Sketch of Offset Dish

1. Elevation naturelle=natural elevation.

2. Rayonnement=radiation

3. L=H sin(elev.nat).....L=H sin(natural elevation)



THE CONVERTER

The LNB, Low Noise Block also called LNC for Low Noise Converter or SHF head is arranged jn the following way:

1. Antenne sonde d'entree=Antenna probe at entry.
2. Amplificateur faible bruit (GaAs)= Low noise amplifier (GaAs) 3. Filtre R.F.=R.F. filter
4. Melangeur=mixer

5. Oscillateur local=local oscillator

6. Ampli FI=IF amplifier

7. Connecteur de sortie=Output connector

8. Alimentation=power supply

It is composed of:

An antenna which is a 1/4 wave probe, retractable in a cavity of WR 75 wave-guide. The low cut-off frequency of this wave-guide is 10.0 GHZ.

A very low noise amplifier in which the noise factor is 1 db and three stages with a gain of 25-30 db.

An R.F. pass band filter in printed circuit lines to suppress the image frequency.

A local oscillator, which for reasons of price and size, is a Dielectric Resonance Oscillator or DRO. For the band 10.95-12.75 Ghz, the LO is always below the input frequency. (Translator's Note: This is the European Ku satellite band and NOT the US band)

A mixer, generally diodes, which present a loss of about 6 db.

An I.F. amplifier low noise, NF=2 db, Gain=30 db is often a monolithic circuit.

A power supply, which includes often, a regulator 10 VDC for the I.F., a 5 VDC regulator for the LO and the input amplifier and converter, an -3 VDC for the polarization of the FET GaAs. The current comes from the output coaxial cable.

CHOICE OF THE SHF HEAD

The problem is to shift the converter frequency to cover the amateur band from 10.0 to 10.5 GHZ. The procedures for modification have been guided by a single goal: everyone should be able to modify their 10 GHZ material without the need for sophisticated measuring equipment and by following some step-by-step instructions. The model for conversion is the NJR8170F from NJRC pictured at the start of this article. This converter is distributed in France by Tonna and is available under their reference number 750130. (Translator's Note: It is also available from Denys; see elsewhere in this issue)

This head is not miniaturized to the extreme and is, again, easy to modify. All the functions are clearly separated.

Picture of "La Tete SHF NJR8170F avant modification."=The SHF Head NJR8170F before modification.

1. Ampli d'entree a faible bruit= Low noise input amplifier.

2. Filtre=filter

3. Melangeur=mixer

4. Vis de reglage de 1'OL=Local oscillator tuning screw.

5. Convertissuer -3V= Converter -3 VDC.

6. Reglage des tensions grille=adjustment of voltage grids.

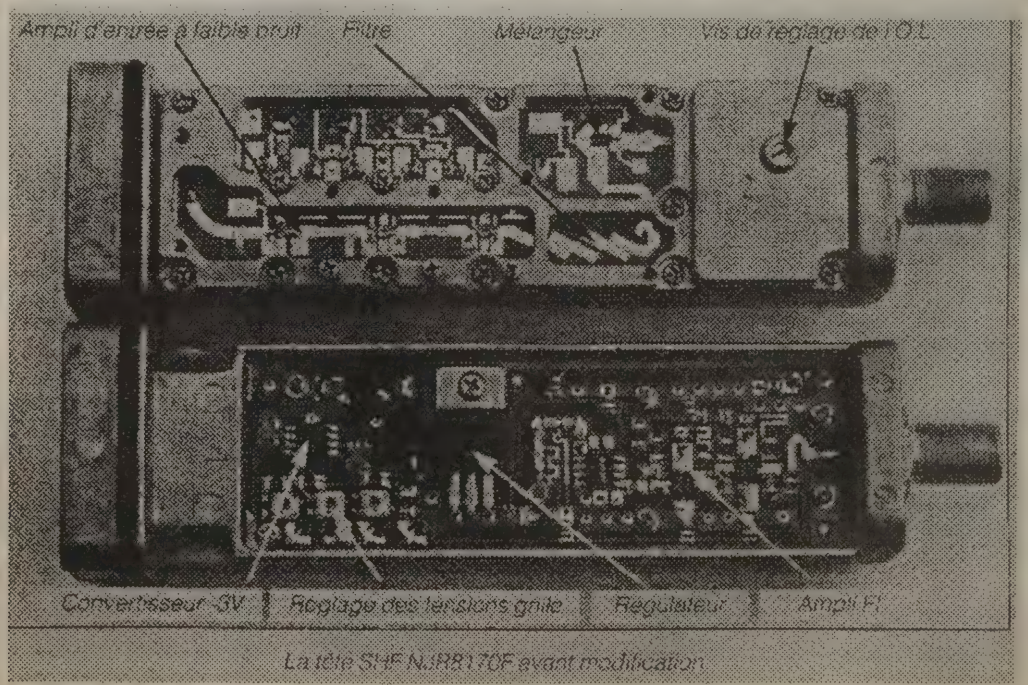
7. Regulateur=regulator

8. Ampli FI=IF amplifier.

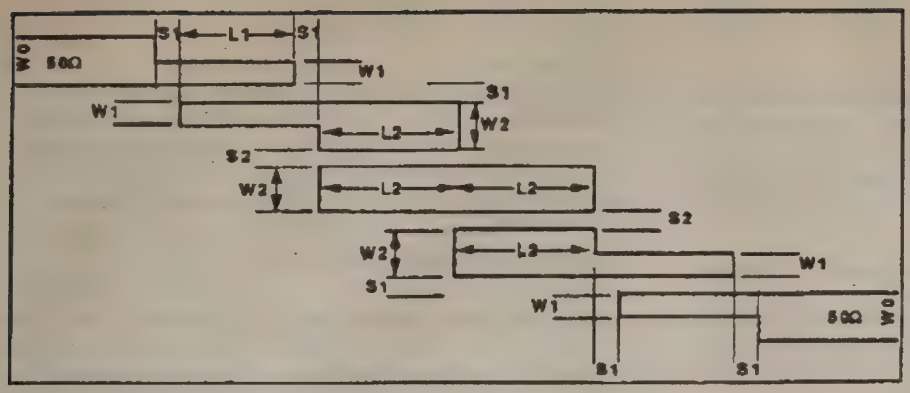
10-10.5 GHZ FILTER

This filter has been calculated with the Touchstone program. The input and output impedances have been set at 50 ohms. The printed circuit board is on glass teflon double sided board of .79 mm thickness with an E.R. of 2.55. The sides are WO=2.16 mm, W1=0.25 mm, W2=1.1mm, S1=0.6mm, S2=0.75 mm, L1=4.3mm, L2=4.7mm.

The filter should be inclined in order to occupy the least possible space. To reproduce the filter, photo reduce the layout to the final size and photo-print the substrate. The two sides of the circuit board can be silver plated.



The SHF Head NJR8170F before modification.



SKETCH OF FILTER

DETAILED MODIFICATION STEPS

1. Take off the nut on the output F fitting and remove the bell shield. The IF parts are visible while the cover masks the RF parts. The local oscillator cavity is equally visible. DO NOT turn the oscillator tuning screw if you want to keep the factory tuning.

2. Remove the cover and save the screws. The three input stages , the RF filter, and the mixer diodes appear.

3. Lift up the interstage shield and keep the screws which are longer than the cover screws.

4. Make a new RF filter according to the design. With the aide of a very sharp knife, cut out the filter already in place. Clean the area with a non-greasy solvent of the acetone variety.

5. Position the new filter and connect the input and the output by the narrow bands of copper (1.5 x 2 mm).

6. As indicated on the design, make, then install and solder the copper stubs with a low-wattage soldering iron having lifted before hand the rejector with a cutter.

7. Reduce the length of the stub on the input stage to 0.8-1.0 mm.

8. With a low-wattage soldering iron, drive out the entry probe (Antenna) to bring it to the same level as the printed circuit. (The length of the antenna in the guide increases from .5 mm)

9. Reconnect the shield; replace and tighten all the screws.

10. You can test your 10 GHZ converter before putting on the LNB cover and the DRO cover. Don't forget to reseal the rubber rings which provide the watertight joints.

This modification requires less than one hour and no tuning is necessary to obtain good functioning.

3 STAGE AMPLIFIER WITH 10-10.5 GHZ FILTERS

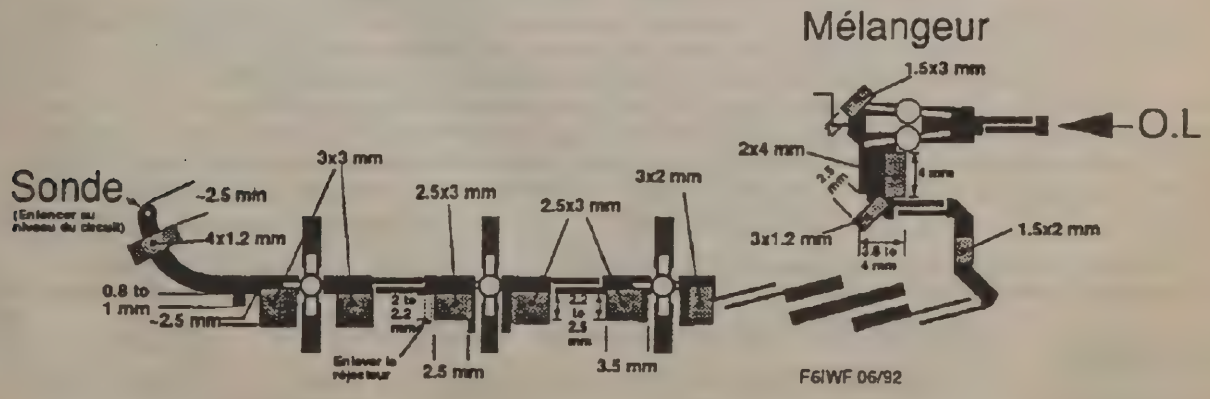
Sonde=Probe

Melangeur=Mixer

O.L. =Local Oscillator

(Enfoncer au niveau de circuit)= drive out the probe equal to the circuit board level.

Enlever le rejecteur=Take out the rejector.



Amplificateur à 3 étages Filtre 10-10,5 GHz

3 STAGE AMPLIFIER WITH 10-10.5 GHZ FILTERS

RECEIVER

If you already have a satellite receiver, you can, of course, use it. If it is equipped with a video inversion circuit, you can just connect it and receive pictures. If your receiver does not have a video inversion circuit, you should build and install this small interface to invert the video signal.

If you want to get a system, ensure that it is equipped as follows:

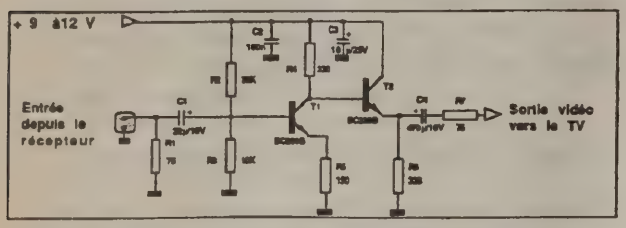


DIAGRAM FOR THE VIDEO INVERTOR

-Video inversion
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-A device for tuning and memory for some audio sub-carriers.
-An uncompensated base band video output for high speed data transmission.
-If you like portable work, get a 12 VDC model.

Entree depuis le recepteur=Input from the receiver.

Sortie video vers le TV=Video output to the TV set.

Translator's note: It has been my treat to translate this article as I had the pleasure to meet Denys at the November 1996 ANTA meeting at Tours then to discuss 10 GHZ in general with him for about 4 hours and finally to visit his station near Reims. I have a modified LNB from Denys in service and I like it. He can make these modified LNBs available to you in the US. Contact me for details at EMAIL W3HMS@aol.com or 717-697-3633 or 912 Robert St. Mechanicsburg, PA. If by mail, SASE, please

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GETTING ON 2.4 GHZ FM ATV

Revisited

Bill Parker - W8DMR
2738 Floribunda Drive
Columbus, Ohio 43209

The WaveComm 2.4 Ghz Transmitter and receiver may be purchased for about $125 (Qty of 5, from Mel Shadbolt). The TX & RX are of excellent quality and workmanship. The main disadvantage is the low output power of about 0.25 (1/4) of one milliwatt.

There is about a 10 dB attenuator that can be removed. The pad consists of three resistors, 100, 680, 100 ohms. The pad is located after a d-c blocking capacitor and before the PW filter. The resistors are surface mount components (SMC) and require a little skill to remove without damage to the PWB.

The writer removed the 680 ohm and both 100 ohm resistors next to the PW filter. The resistors are clearly marked as to value. If sufficient heat is applied to one end of the resistor, the other end may be slid from the connecting soldering pad.

Make a strap from a 5/16 inch long and 1/8 inch wide flat piece of copper. Solder one end of the jumper to the junction of the d-c blocking capacitor and the remaining 100 ohm resistor. Solder the other end to the input of the printed wiring (PW) filter. Be sure the jumper does not extend to the adjacent printed wiring ground pad where the 100 ohm resistor was formerly connected.

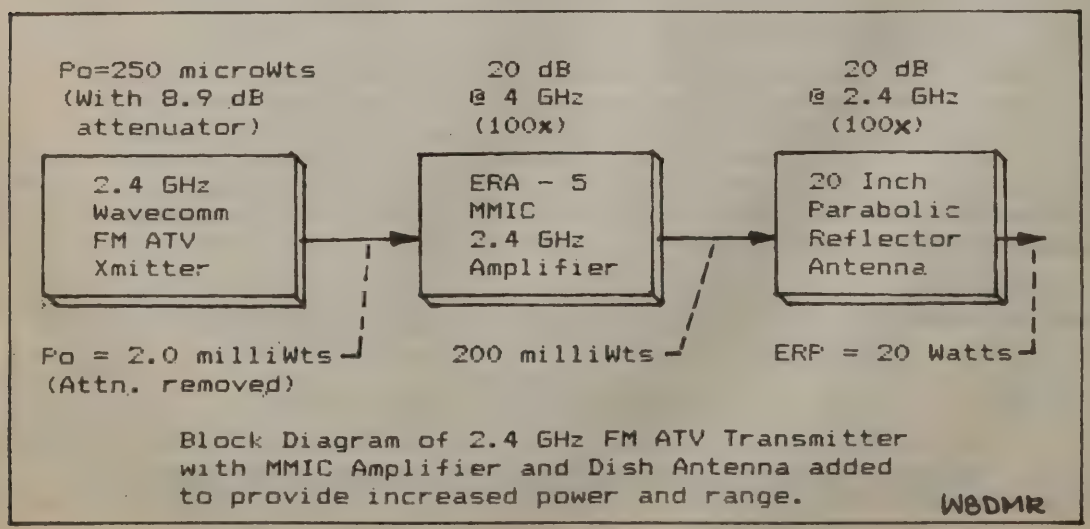
To make the RF TX unit more modular, an F-fitting was added in place of the antenna cable. The center lead must be kept short in length and the shield of the RG-6 Coax must be soldered to the ground foil of the PWB and the shield case.

Removing the 8.9 dB pad will raise the output power from 0.25 milliwatts to about 2.5 milliwatts. The next step is to add a MMIC amplifier, Type ERA-5, manufactured by Mini-Circuits. The amplifier has about 20dB of gain (100 times) at 4 Ghz. It will increase the output power to about 200 milliwatts or 0.20 (1/5) of a watt.

With an 18 inch parabolic reflector antenna, providing a pain of about 20 dB, the effective radiated power (ERP) will be approximately 20 watts excluding any feed line loss. The small PW antenna supplied with the units are advertised as circularly polarized antennas. Most ATV enthusiasts will use external antennas of linear polarization, be it vertical or horizontal.

If the small PW antenna is replaced at the receiving unit with an antenna similar to the transmitting antenna, the LOS of range will be extended even more.

Study the accompanying photographs before starting this simple and worth while modification. The 300 foot range will be extended to a line-of-sight (LOS) range of many miles. The quality of the received color video and stereo sound is excellent. And best of all, interference free.



Block Diagram of 2.4 GHz FM ATV Transmitter with MMIC Amplifier and Dish Antenna added to provide increased power and range.

Table of Wavecomm Output Frequencies	
Channel Number	Frequency (MHz)
One	2,433.75
Two	2,452.75
Three	2,472.75
Four	2,410.75

Observe the channel frequencies are not in ascending order as one might expect. Channel 4 is the lowest, while Channel 3 is the highest. The channels are spaced approximately 20 Mhz apart or about +/- 10 Mhz. The exact reasoning for the non-logical frequency spacing is not known at this time. It is probably to reduce interference when several links are operating in close proximity to each other.

MMIC Characteristics (Mini-Circuits)					
Type Number	Freq. R. (MHz)	Gain (dB)	-1 dB Comp. (dBm)	NF (dB)	IP3 (dBm)
ERA-5	4,000	19.0	+36	4	+36

Remove the four bottom screws. The main printed wiring board is fastened with a fifth screw located under the shielded TX unit. The metal TX module is held very firmly to the PWB by an adhesive piece of black foam. To allow removal of the TX module, use an X-acto knife to release it from the foam.

The fifth screw remains. There aren't any parts on the under side of the main PWB. The top and bottom shield covers on the TX module eventually need to be removed. Later when replacing the top and bottom shield covers, They must be oriented the same way as before they were removed. Important.

The regulator IC is a 7808. There are 3 IC's in the TX module, namely: 1) PIC-16C54A, 18 pin, 2) TSA-5055T, 16 pin, and 3) TL-NE592D, 8 pin. All are of the flat pack variety. The TX unit is connected via a 10 pin, to the main PWB. If the Channel Selector is removed for ease of handling, be sure to reconnect it when re-assembly occurs.

With the top and bottom shield covers removed, locate the 8.9 dB attenuation pad, consisting of 101, 680, 101 labeled resistors. Remove the 680 and both 100 ohm resistors. Install a short jumper strap to complete the RF circuit. Observe the before and after photographs of the TX module when the comers were removed.

Remove the miniature coax cable that is connected from the output of the PW filter. The d-c resistance of the coax to the small square-encased C-P antenna will measure open circuit. If you managed to short the coax, it will not measure open circuit. If you remove a C-ring at the hinge of the antenna, the brass pin holding it may be removed, allowing the antenna assembly to be separate.

The shield of the RG-6 coax cable should be soldered to the case of the TX. The shield should be connected to the metal case on each side and also to the PWB (3 places). See photograph. The center lead of the RG-6 coax cable should not be longer than absolutely necessary. Solder the shield of the coax to the metal case of the TX. Exercise caution so as not to melt the foam dielectric when soldering the shield to ground. Use a length of RG-6 about 12 to 18 inches in length. A male F-connector is fastened to the other end of the pig tail.

Use an X-acto knife or a file or hot cutting blade to make a small relief notch or hole that is needed in the outer black plastic case to allow the coax cable to exit.

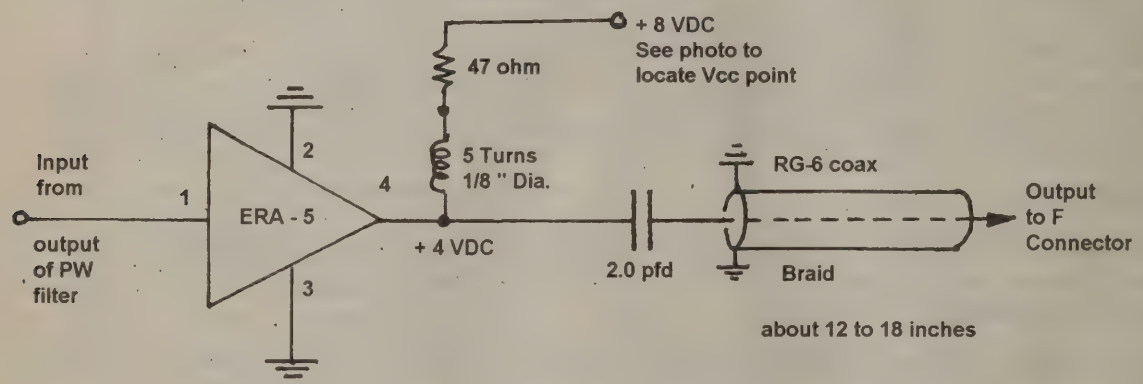
Re-install the small black plastic slide that moves the ON-OFF switch. Connect the 5-wire cable for the Channel Selector and LED assembly to the PWB. Replace the four bottom screws that hold the outer case-halves together. As an option, the MMIC amplifier is the next step. If the MMIC ERA-5 amplifier is to be located internally, then delay the re-assembly.

The ERA-5 MMIC fits nicely in the transmitter unit with very few additional components required. The internal power supply easily provides all the necessary current needed.

A 47 ohm ¼ watt resistor and a 5 turn, 1/8 inch diameter, #28 AWG choke coil are connected in series from +8 VDC to pin 4 of the ERA-5 amplifier. A DC blocking capacitor must be connected from pin 4 to the center lead of the RG-6 coax cable output.

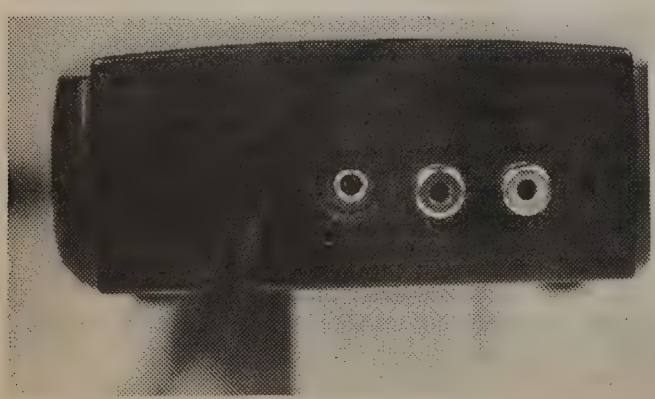
Carefully observe the photo of the transmitter. The ERA-5 is just a small round black dot. Pins 2 and 3 are connected directly to ground. The input to the ERA-5 connects to the other side of the PWB. The output of the filter is where the original miniature coax center lead was connected. A plated thru hole exists at the output of the filter. Solder pin 1 of the ERA-5 to the filter output solder pad.

The capacitor used to connect pin 4 to the coax center lead is a 2.0 pfd ceramic axial lead capacitor. The cover for the transmitter unit was notched as can be seen in the photo. A micro-miniature ceramic variable trimmer may be used in place of the fixed value 2.0 pfd capacitor if desired.



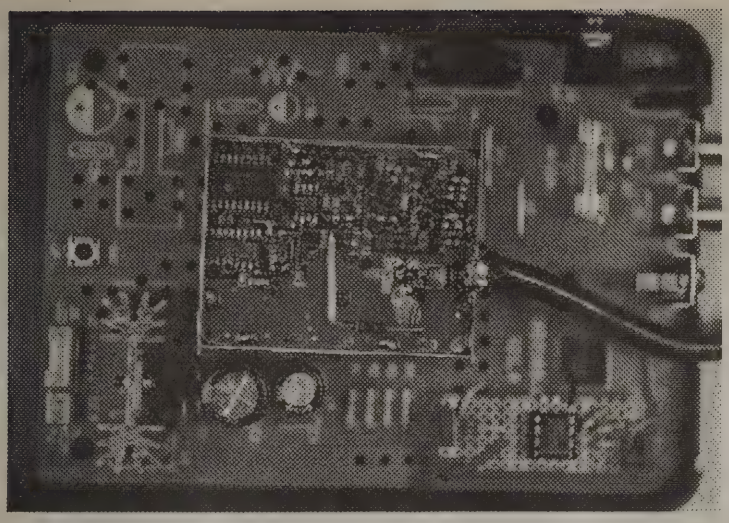
All the leads, including the ERA-5, will be less than ¼ inch in length. The only longer connecting lead is the 47 ohm lead which connects to the + 8 VDC supply. It is not a critical length.

The ERA-5 may be purchased from Down East Microwaves for about $6.00 plus postage. They also offer loop yagi antennas for 13 centimeter wavelength operation. Write and request a catalog. Also, offered is a PWB kit, but you must request which type of MMIC you desire. The kit includes the SMC capacitors. The kit cost is about $15.00. Be sure the cover to the TX unit does not cause any shorts when replaced.



REAR OF UNIT

Hole to permit RG-6 to exit. One of the RCA Phone connectors was removed & replaced with a phone jack to accept a microphone plug. See other photo where a 741 op-amp was added as a micro-phone preamp.



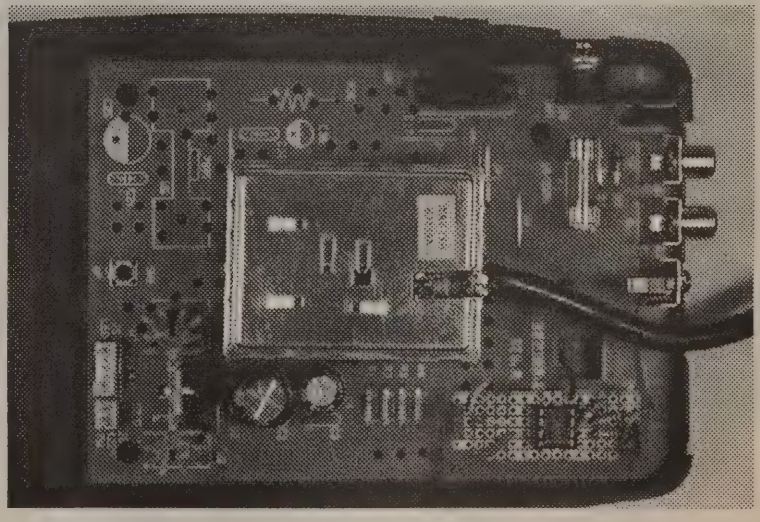
TX COVER REMOVED

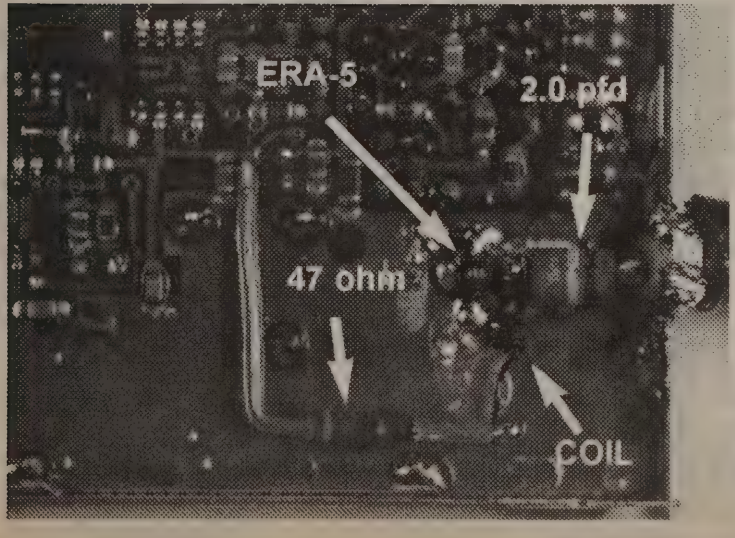
In lower right corner, the microphone preamp, a 741 op-amp, can be seen. The RCA inputs are designed for a 1 V p-p audio level input. The mike preamp has a gain of about 100, or permits an input of about 10 millivolts.

The 47 ohm resistor, the 5 turn coil, and the 2.0 pfd capacitor can be seen. See schematic to familarize. The RG-6 coax cable exits on the right. The phono jack can also be seen.

TX COVER IN PLACE

Cover has a notch added to allow room for 2.0 pfd ceramic capacitor.



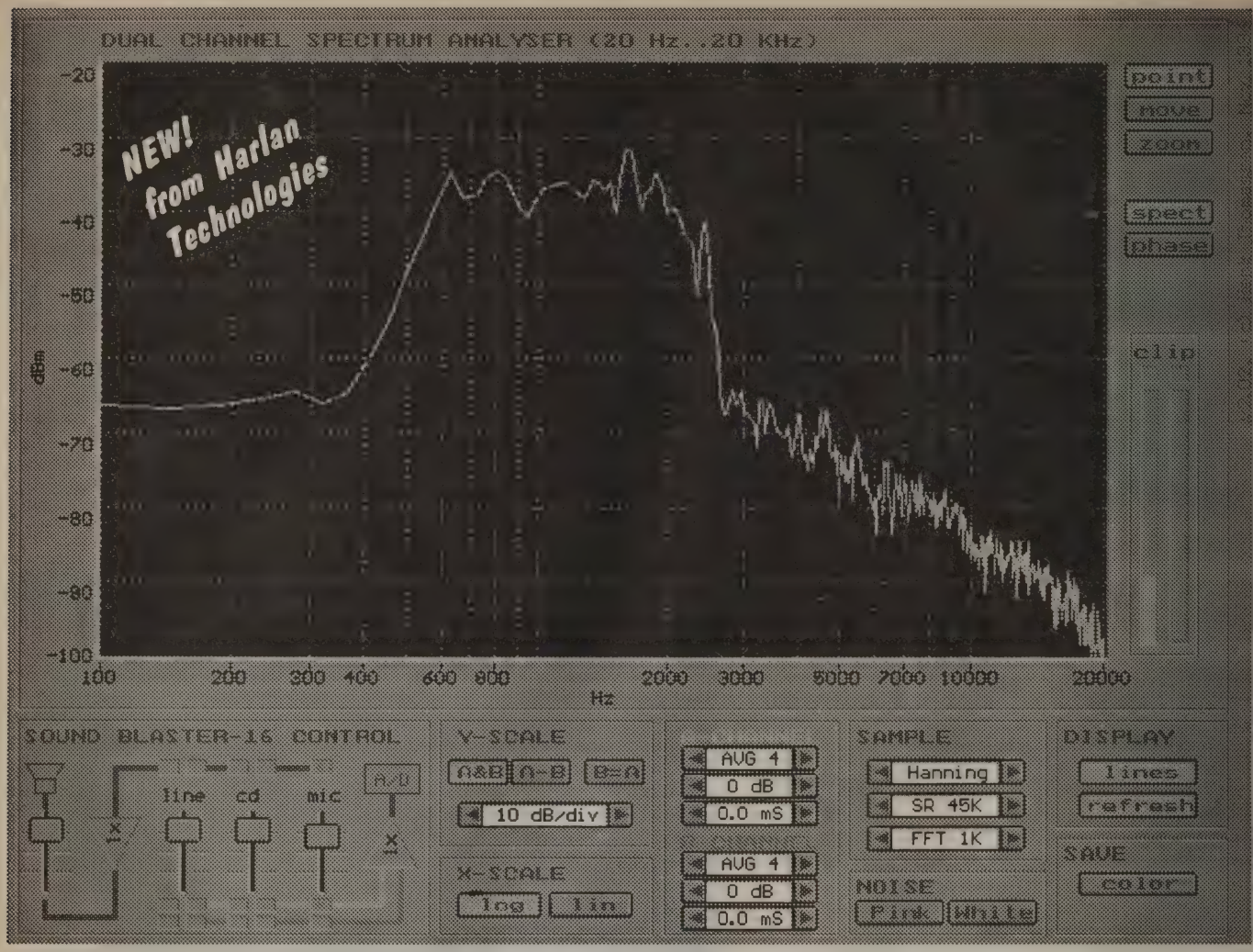


TX UNIT CLOSEUP

The 47 ohm resistor, the 5 turn coil, and the 2.0 pfd output capacitor are shown.

The ERA-5 is located just to the left of the 2.0 pfd capacitor. There is some white lettering on the MMIC.

A piece of clear plastic tubing is slipped over the longer lead of the 47 ohm resistor.



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Audio Spectrum Analyzer for the SB16 or AWE-32 Sound Blaster

Spectrum FFT is an audio spectrum frequency analyzer with the ability to output noise (pink or white) for testing of filters, sound systems, and room acoustics as well as to monitor the audio spectrum from 20 Hz to 20,000 Hz (input and output can be simultaneous). Input can be from line in, mike in, or CD in on the sound card, and all controlled by software using your mouse. Two channels can be shown at the same time, added, or subtracted. You can freeze the display, point to display the dB and frequency, zoom, move to show the frequency range of interest, and save a display to a .PCX file for later evaluation. Compare this program with others that cost hundreds of dollars more!

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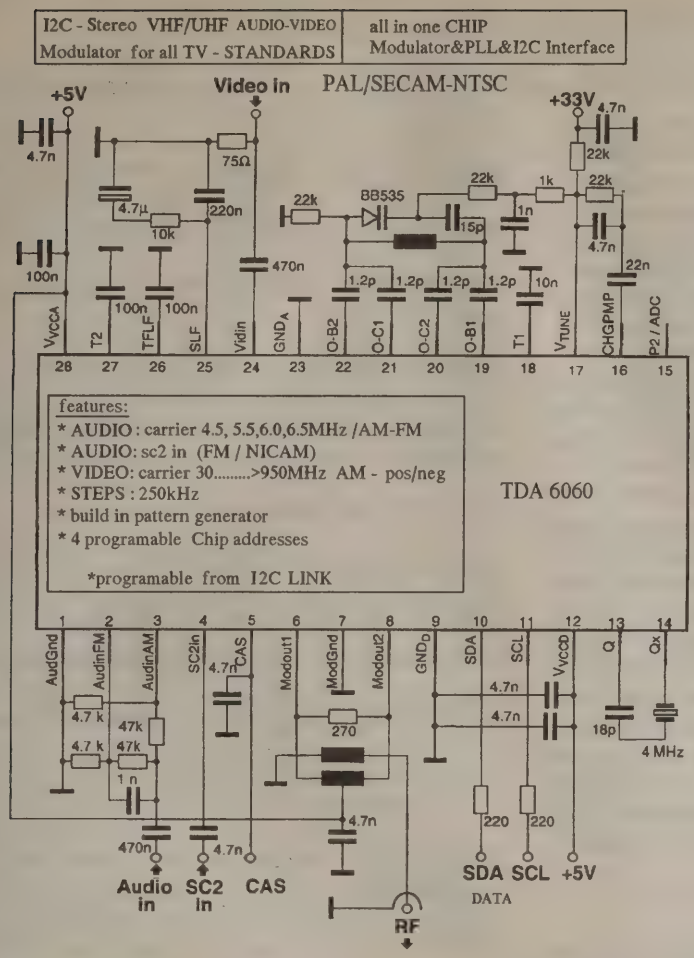
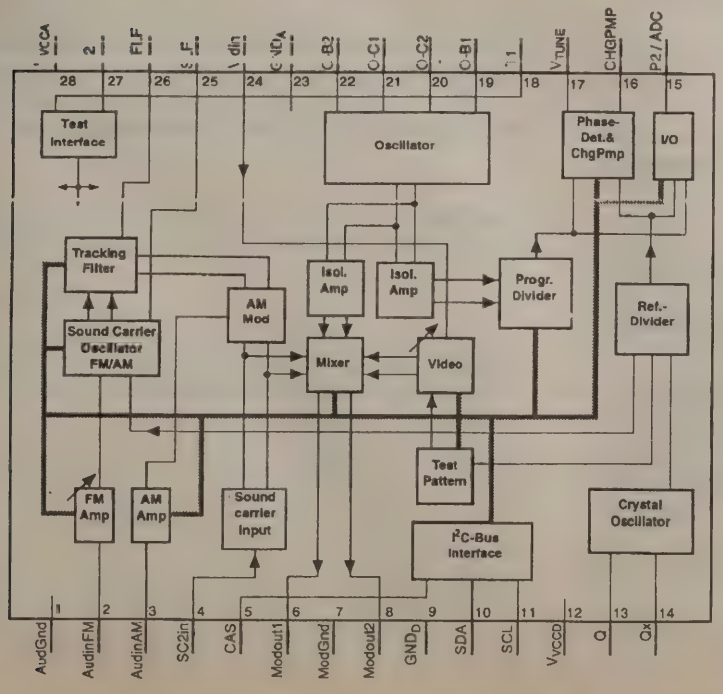




NEW PRODUCT ANNOUNCEMENT

Picotronic Communication has announced a new stereo VHF/UHF audio video modulator for all TV standards, all in one chip. The price each will be approximately $7.00 US. Production is to start in April 1998. Look for more information in the future or contact:

Picotronic Communication
Postfach 2271
67663 Kaiserslautern
Germany

tel ++49 171 4025259
fax ++49 631 29579

ARRL minute 63

From the Internet

See Sept 97 QST page 66 minute 63 of the last Directors meeting, it could be very important to us as ATV'ers. The ARRL is thinking of sending to the FCC a proposed rule making that would add in 97.101(a) the sentence "Amateur operators should be familiar with, and should abide by, the voluntary band plans that are applicable to the frequency bands in which they operate". This is some what watered down as far as Rules go in that it uses the word "should" rather than must be. This is the first reference to band plans in the FCC rules and could force frequency coordinators to actually come up with local published band plans. If they do this, then they will be forced to consider ATV as a legal mode per 97.301 in the 420-450 MHz band and come up with a sound technical band plan.
I suggest contacting your areas Director (page 10 of QST) and urging him/her to make sure minute 63 gets implemented, and second get involved with your local frequency coordination council when the time comes to form and document the local band plan. Push for a technical committee made up of one or two technically qualified members from all modes and complete consensus for the band plan. Make a band plan that works and will be respected with room for all to operate with minimum probability of interference. We did it here with SCRRBA (Southern Calif. Repeater and Remote Base Assn.) and it works. SCRRBA voted to support minute 63 at the recent membership meeting. A sound bandplan in place if and when the FCC passes the single point of contact rule will prevent a lot of hassle over coordination and interference problems.

Tom O'Hara W6ORG
ARRL Technical Advisor for Spectrum Management and ATV
SCRRBA Technical Committee Member

Software Engineering Glossary or Defining Computer Terms From a "Marketing" Point of View

ALL NEW — The software is not compatible with previous versions.

ADVANCED DESIGN — Upper management doesn't understand it.

BREAKTHROUGH — It nearly booted on the first try.

NEW — It comes in different colors from the previous version.

DESIGN SIMPLICITY — It was developed on a shoe-string budget.

EXCLUSIVE — We're the only ones who have the documentation.

FIELD TESTED — Manufacturing doesn't have a test system.

FOOLPROOF OPERATION — All parameters are hard coded.

FUTURISTIC — It only runs on the next-generation supercomputer.

HIGH ACCURACY — All the directories compare.

IT'S HERE AT LAST — We've released a 26-week project in 48 weeks.

MAINTENANCE FREE — It's impossible to fix.

MEETS QUALITY STANDARDS — It compiles without errors.

PERFORMANCE PROVEN — It works through beta test.

REVOLUTIONARY — The disk drives go round and round.

SATISFACTION GUARANTEED — We'll send you another copy if it fails.

STOCK ITEM — We shipped it once before, and we can do it again, probably.

UNMATCHED — It's almost as good as the competition.

UNPRECEDENTED PERFORMANCE — Nothing ever ran this slow before.

YEARS OF DEVELOPMENT — We finally got one to work.

THE PICTURE DX BULLETIN 19
December 1997

Danny Van Tricht - ON4VT - email: ON4VT@ping.be
Hulshoutveld 2
B-2235 HULSHOUT
BELGIUM
http://www.ping.be/on4vt

Information this month came from: SM5EEP, ON4PL, ON6DB, KL7J, FRA1AG, ZS6Y, ZS6RVG, W5NOO, HA5KKW, OK1ABF, DL8LZM, K3ASI, JA2BWH/1, HB9AXG, WB9VCL and EA1OD

AFRICA

5X-Uganda Keep looking for 5X1T, usual QRV in the African evenings. QSL via ON5NT.

7P-Lesotho ZS6RVG and friends are planning a trip to Lesotho from 22 January 1998 until 26 January 1998. They will operate SSTV from here ! Look out !!!

7X-Algeria 7X2BK, Camel, is still rather active on 20 meters SSTV. QSL via CBA.

9Q-Dem. Rep. Congo 9Q2T, Peter (ON6TT), has been on the air with the first SSTV ever from Democratic Republic Congo. QSL via ON5NT

TT-Chad TT8KM, Michel is now QRV from NDJAMENA Chad. (Michel was also FR5HG and D68SE, and very active from his home QTH as F5MXQ). Also his friend TT8BE Etienne became QRV in SSTV. QSL for both stations direct to F6FNU.

ZS-South Africa A lot of activity from here. Look for ZS6Y and ZS6RVG who are very active in SSTV on 15 and 20 meters.

ASIA

4X-Israel More and more stations from Israel discover SSTV! Worked and seen on 15 and 20 meters : 4Z5AO and 4X1CG

EZ-Tadjikistan EZ8BM, Alex, is a newcomer in SSTV. Worked and seen on 15 and 20 meters. QSL via CBA.

*** EUROPE

9A-Croatia 9A3XD showed up on 20m SSTV. QSL via buro.

C3-Andorra C31SD is still very active as well on 15 as on 20 meters SSTV. QSL via CT1AMK.

EA6-Balearic EA6MQ, Jose, is very active in SSTV . Look on 15 and 20 meters!

EW-Beylarussia EW6WF is the club station in Vitebsk and from now on also QRV in SSTV mode..

HV-Vatican City Peter, ON6TT, managed to become QRV as HV4NAC. He made a dozen SSTV contacts on 20 meters. QSL for this operation via IK0FVC. I asked Peter to convince IK0FVC to try more SSTV in the future. So far no more news!

OK-Czech Rep. Every sunday morning at 10:00utc there is an OK SSTV roundtable on 3730 (80 meters). Many OK stations QRV there.

S5-Slovenia S57JVG, Velko, was QRV on 20 meters.

NORTH AMERICA + CARIBBEAN

6Y-Jamaica 6Y5GH, Gordon is worked in the USA. Very nice pictures ! Any one worked him in Europe??

CO-Cuba CO3SG, Martin , is another newcomer in SSTV. Worked and seen in the USA on 20 meters.

HR-Honduras HR1LW, Yoshio, is an old timer in SSTV. He showed up again on 20 meters. QSL via CBA

KP4-Puerto Rico Still a lot of activity from here. KP4AE had a good signal on 20 meters !

W-USA K3ASI reports a few weak signals from Europe on 28680 10 meters. He is mostly in RX on this frequency and with the improving conditions this must lead to some good European pictures! Keep trying ! There is a whole lotta space on 10 meters guys !!!

OCEANIA

VK-Australia Many stations from "Down Under" are active. Also some activity on 15 meters! Worked and seen: VK3HK,

VK3UK, VK2DSG etc ...

V7-Marshall Isl V73AT, Tim, is new in SSTV. So far not seen in Europe.

YB-Indonesia YB4JIM, Didi, is active in SSTV on 20 and 15 meters.

ZL-New Zealand ZL3MA had a big signal into Europe over the long path. Look at the picture down this bulletin and remark the "Polar flutter" interference on this one !!! Signal was 57, no other QRM ! ZL3MA is also often on 21340.

SOUTH AMERICA

Many PY and LU stations active. But is there any other activity from South America??

SHORT NEWS

The higher bands are getting better and better. So once again please try it higher up! At this time during the day 15 meter is open to all continents (I hear stations in SSB and CW, with good signals, every day and from all parts of the globe). It's very frustrating to send dozens of CQ pictures without one answer ! And don't forget ten meters !

When you see a CQ picture or another picture from a station you want to work with , please call first in PHONE !!! This will avoid a lot of useless QRM ! 20 meter SSTV frequencies are 80% of the time not usable because of several pictures transmitted at the same time !

I like to publish a list of the 1998 SSTV and FAX contests. So I like to ask all organizers of a contest to send me all dates and rules. It's my idea to collect all contest rules and put them on a separate page in my website.

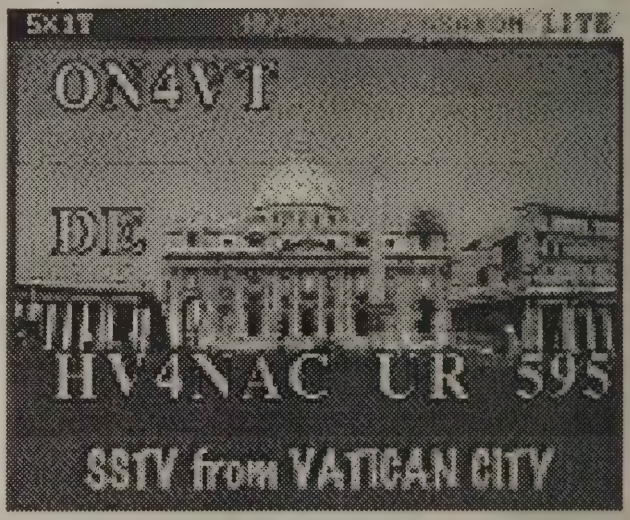
SSTV QSLs RECEIVED

OA4BP, C31SD

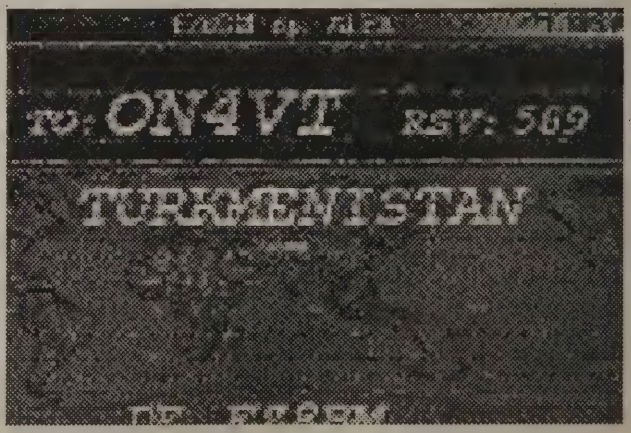
THIS MONTHS PICTURES

ZS6Y, ZL3MA, HR1LW, TT8KM, HV4NAC, EZ8BM, HA5CQ, 4Z5AO, 9A3XD
This pictures are on my website: http://www.ping.be/on4vt

ZS6Y



HN4NAC



EZ8BM

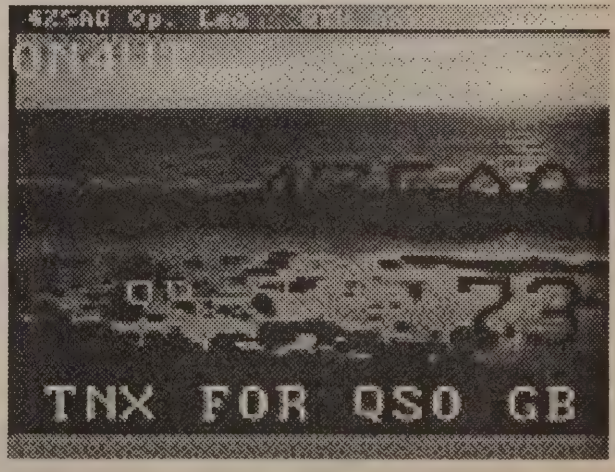
HR1LW

HA5CQ

TT8KM

9A3XO

ZL3MA



4Z5AO

National ATV Organization (ATNA)

Fred Juch - N5JXO - juch@flash.net
(713)465-0360
13054 Pebblebrook
Houston, TX 77079

The national organization that is forming to promote ATV in North America has been working to resolve several administrative issues regarding forming a group of this large size and importance. The group after careful deliberation has decided to name itself:

Amateur Television of North America or ATNA for short. ATNA has set up a web page at

http://www.smart.net/~brats/atna.html to post information about the club, and the organizations progress.

In the near future we will be posting information about membership dues, and the organization's projects for the future.

ATNA's Mission:

1.Protect our ATV interests and frequencies.

2.Use video transmission methods to support public service.

3.Plan for the amateur radio adoption of new technology.

4.Advance the state of the art of video and video transmission methods.

5.Work with Frequency Coordinators as the official coordinating body for Fast Scan ATV in North America.
6.Associate in an equal role with other like minded societies.

Our Treasurer has received funds from the following organizations to help start the group:

Donation At CAATN meeting (passing hat)

Donation From CAATN

Donation From BRATS

Donation From HATS

Donation From Arizona Amateurs on Television Inc

The total amount in the treasurery is now $263.00.

We look forward to serving the ATV community, and I look forward to keeping you informed about the workings and project of ATNA.

Sincerely,
Fred Juch, N5JXO
Chairman of Publicity

Officers:

John A. Jaminet, W3HMS (President)
w3hms@aol.com

John H. Shaffer, W3SST (Vice Chairman)
w3sst@juno.com

Harry F. Deverter, N3KYR (Treasurer)
hdeverter@redrose.net

Ronald B. Cohen, K3ZKO (Secretary)
ronk3zko@juno.com

Fred Juch, N5JXO (Chairman of Publicity)
n5jxo@stevens.com

Arthur C. Towslee, WA8RMC
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John O. Hey, W8STB
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John D. Hays, K7VE
jhays@hays.org

Fred Juch N5JXO
(713)465-0360
13054 Pebblebrook
Houston, TX 77079
juch@flash.net

Say you saw it in ATVQ!

BUILD THIS YAGI ANTENNA FOR 439 MHz ATV!

Reprinted from the ATCO Newsletter - October 1997

by Art Towslee - WA8RMC email: towslee@ee.net
180 Fairdale Ave.
Westerville, OH 43081

Ed Post N8KQN has most generously donated his time and effort to come up with this "monster" of an antenna. I'm sure that the repeater will look like channel 4 with this one. All kidding aside, you might want to play around with something like this when the Dayton repeater gets back on line (soon). The Gamma match details were omitted here for simplicity. It is nothing special and well represented in the Radio Amateur's handbook and other publications. If you want to tackle this, enlist Ted or myself for some help....WA8RMC / N8KQN.

Specifications

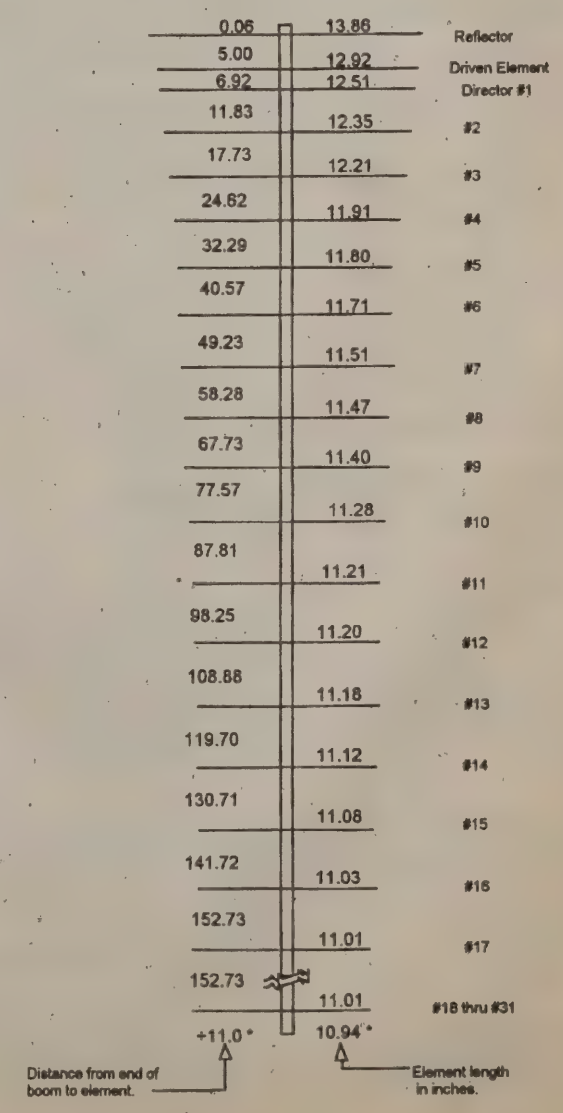
Frequency - 432 to 440 MHz
Elements - 31
Gain - 17 dB
Front to back ratio - 30 dB
SWR@resonance - 1/4 to 1 maximum

Notes:

Driven element is 3/8 or 1/2" OD.
All other elements are 3/16" solid aluminum rod.
The driven element is fed with a gamma match arrangement.
Gamma rod = 3/8" OD x 2.75" long.
Center for Gamma is 2.75" long made from RG8 coax center.
Spacing from center of Gamma to driven element is 1 1/2".

Boom should be 1 1/4" OD.

* Elements 18 thru 29 are all spaced 11" apart. The length of each is 1/16" shorter than the previous one with element 18 starting at 1/16" shorter than element 17 and so on.



Thanks to all the fine stores that carry Amateur Television Quarterly

Amateur Accessories
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Kansas City, MO 64152

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Orlando, FL 32803

Amateur Electronic Supply, Inc
1072 N. Rancho Drive
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Amateur Electronic Supply, Inc
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Amateur Electronic Supply, Inc
5710 W. Good Hope Rd.
Milwaukee, WI 53223

Austin Amateur Radio Supply
5310 Cameron
Austin, TX 78723

Burnaby Radio Comm Ltd.
4257 E. Hastings St.
Burnaby, BC
Canada V5C 2J5

Gateway Electronics
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St. Louis, MO 63130

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Poughkeepsie, NY 12601

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Ham Radio Outlet
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Burbank, CA 91506

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Fort Worth, TX 76112

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Derry, NH 03038

Rogus Electronics
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Southington, CT 06489

Satellite City
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Mounds View, MN 55112

Texas Tower
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Say you saw it in ATVQ!

Don Fuller - W2WHK Pauldon Associates Retires

Don Fuller, W2WHK, co-founder of Pauldon Associates with Paul May, has finally decided to retire. He was licensed in 1941 and devoted his lifetime to the communications field. Don served in the U.S. Air Force, worked for the "Bell System" for 30 years, and spent the last 10 years as a senior partner of Pauldon Associates.

While he regrets having to retire, he feels that it is time. His son, Bob Fuller, N2VPJ, will carry on business as usual.

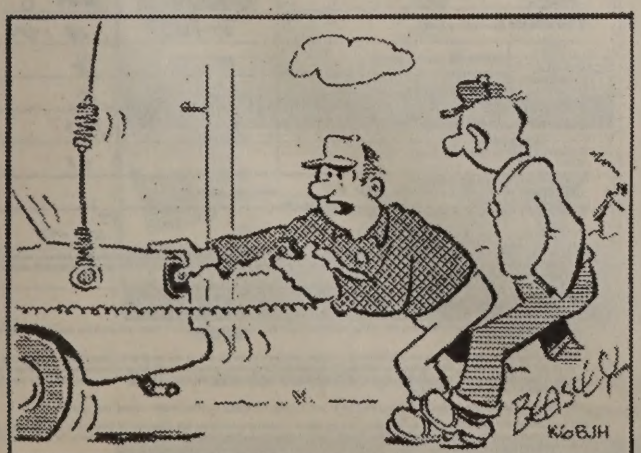
Pauldon carries over 100 different products relating to Fast Scan Television. While they do not have an ad in this issue, they are a regular advertiser in Amateur Television Quarterly. We are told that they will possibly have a brand new ad in the Winter 98 issue of ATVQ.

ATVQ wishes Don many happy years in retirement. He indicated that he might be spending some of them in a warmer climate. The address and email follows if you care to drop Don a note.

Pauldon Associates
210 Utica Street
Tonawanda, NY 14150

716-692-5451 - voice and fax

email: PauldonHAM@aol.com



THIS IS THE ONLY WAY I CAN OPERATE MOBILE-IN-MOTION -- I CAN'T AFFORD THE GASOLINE

ATV'er WINS EMMY

Henry Ruh KB9FO, received an Emmy Saturday, Nov 1, by the National Academy of Television Arts and Sciences. Henry's entry was in catagory 45, Personal Technical Excellence. The entry was based on his unique design for a TV news and production truck, which utilized the latest digital non-linear editing and digital (CCIR 601) equipment. While looking like a standard Ford F-350 news van on the outside, the interior seats six, has 5 racks of equipment, 12 communications systems (wired and wireless) and can support full operation with 1 Beta SP deck, a Sony Digital 3D effects switcher, Avid Newscutter editing system, multiple simultaneous microwave send and receive operations, 16 audio inputs to 8 mix busses, and up to five cameras. The truck has been used for local news, commercial and program remotes, including multiple camera parade and event coverage, and by the stations Network, for coverage of the Democratic National Convention and local live production of several hour long Network programs including multiple venue telecasts. The truck can support simultaneous live, recording and editing functions.

The compact design, use of digital (tapeless) technology and versatility were the keystones to the merit of the design. Several broadcast publications had already written about the vehicle as a milestone in outside broadcast television tools.

Henry beat out many other entrants including several Network submissions.

ALMOST LIVE VIDEO ON THE HATS WEB PAGE!

Well I can't contain myself! I just got ISpy working to the HATS Web Page and it is so cool!

This software will take a picture of the HATS repeater as seen at my house and send it to the web page every 30 minutes. During times of activity when I am at home I will set the timer to two minutes. So dig in and have fun.

A few things to note:
The HATS repeater is up 24 hours per day.
When no users are up a computer is sending ID screens.
Check it out during the nets.

http://www.stevens.com/hats

73
Fred Juch - N5JXO
Email : juch@flash.net N5JXO - Hobby (ATV!)

FCC Enacts Internet Morse Code Requirement

The FCC, under pressure to clean up the Internet, especially after the Communications Decency Act provisions regarding Internet content regulation were stricken as violating the U.S. Constitution, has decided instead to require a Morse code requirement for Internet users. Citing the success of the Amateur Radio Service and the general belief that its requirement for operators to pass a Morse code proficiency exam and other technical requirements, has kept the A.R.S. "clean", the FCC will enact a 5 word-per-minute requirement for all Internet users. They are leaving open the issue of whether there should be a "codeless" class of Internet user and are soliciting comments on this proposal.

Persons wishing to develop a web site having only links to other web sites having links to other web sites, and so forth, must pass a 13 word-per-minute test and demonstrate proficiency in HTML, the Internet authoring language.

Persons wishing to develop web sites that have actual content, as compared to just links to other web sites, must pass a 20 word-per-minute Morse proficiency test, demonstrate proficiency in HTML and the Java programming language, and show that they have mastery of at least one human language, such as English.

The FCC, which lacks budgetary authority to implement the testing program, has stated that it intends to create Volunteer Examiner programs for Internet applicants.

Editors Note: Please do not write if you do not like these new rules until at least April 1, 1998.

DEC- 3-97 MON 1:33 PM ARACHNID ENGINEERING FAX NO. 8:52824736 P. 2

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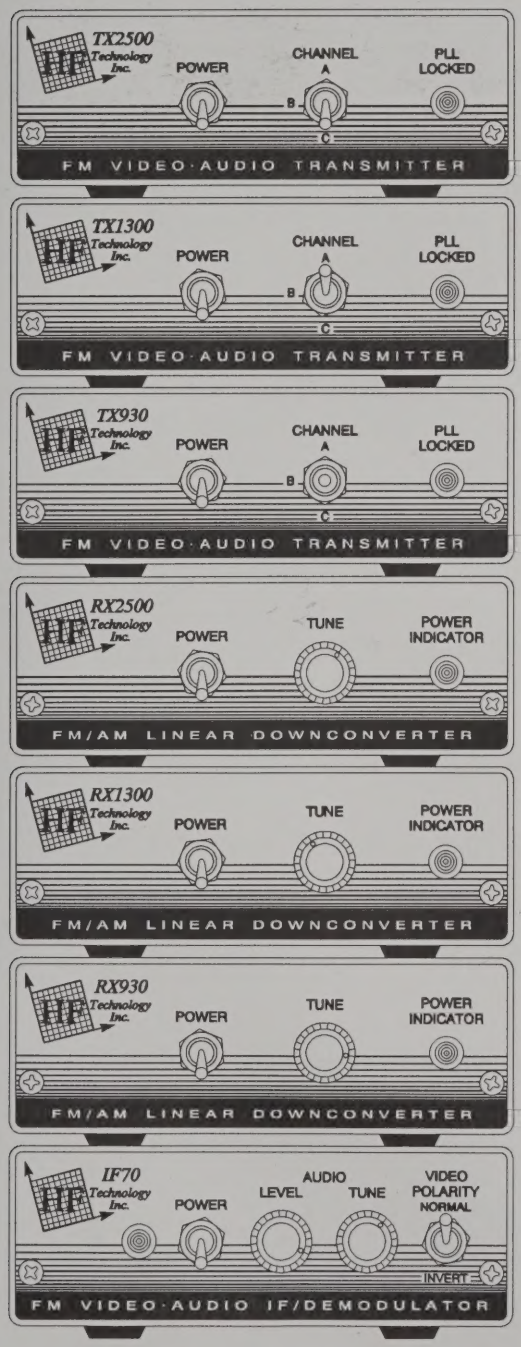

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*DX is up to 90 miles snow free line of sight between 14 dBd beams and using 100 ft. of Belden 9913 low loss coax simplex. Check the ARRL Repeater Directory for ATV repeaters near you or call us for info on other ATVers in your area to find out frequencies, antenna polarization and activities.

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